

Model with Mathematics

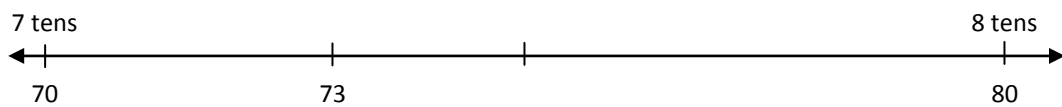
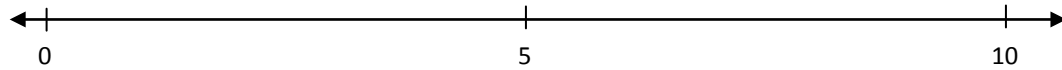
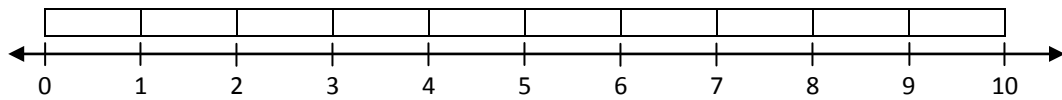
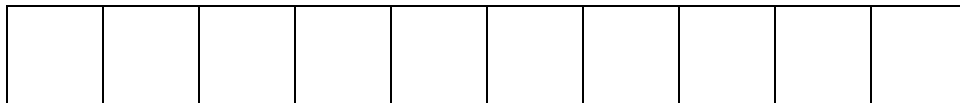
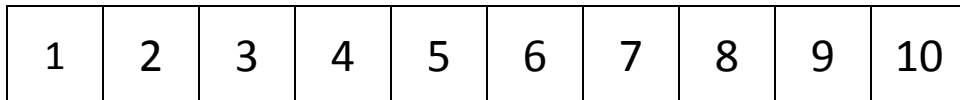
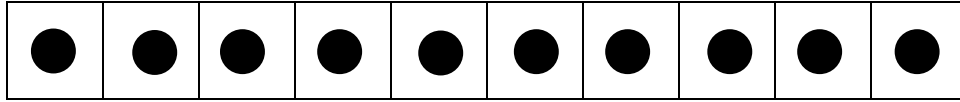
This practice standards calls for students to apply mathematics to solve problems in everyday life. It demands that students simplify a complex problem and identify important quantities to look at relationships. Students should experiment with representing problem situations in multiple ways including numbers, words (mathematical language), drawing pictures, using objects, acting out, making a chart, list or graph, creating equations, etc. Students need opportunities to connect the different representations and explain the connections.

The examples that follow in this document are merely a sampling of the many different approaches students can use to model their mathematical thinking.

Number Paths

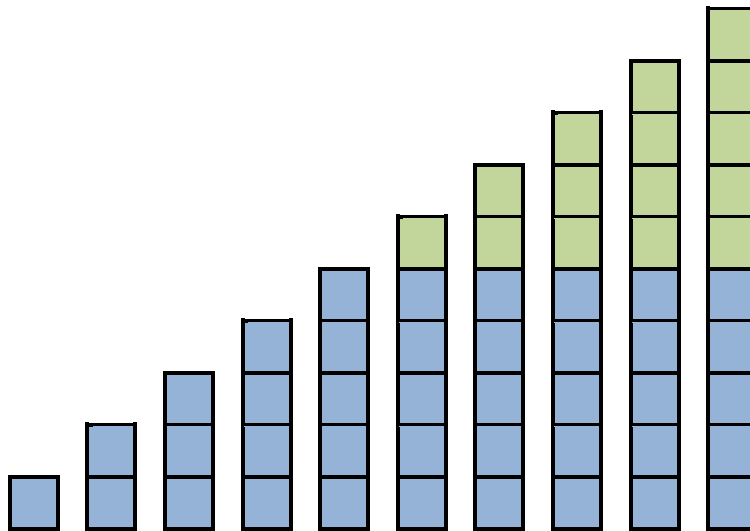
A number path sets you up for units. Units set you up for a number line

There is no "0" on the number path because each piece on the number path represents a unit



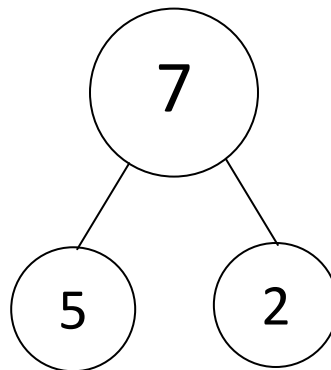
Number Stairs

More than/less than lays the foundation for Algebra

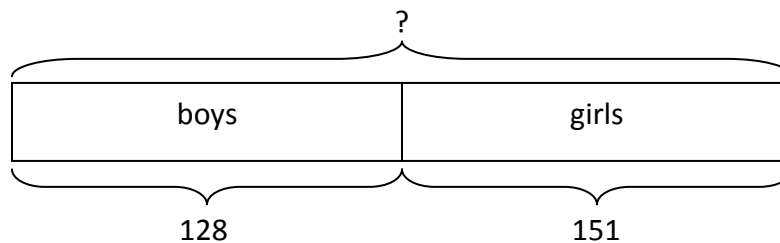


Number Bonds

Introduced in Kindergarten
Students are learning to decompose
Working with fact families
Leads into the bar model

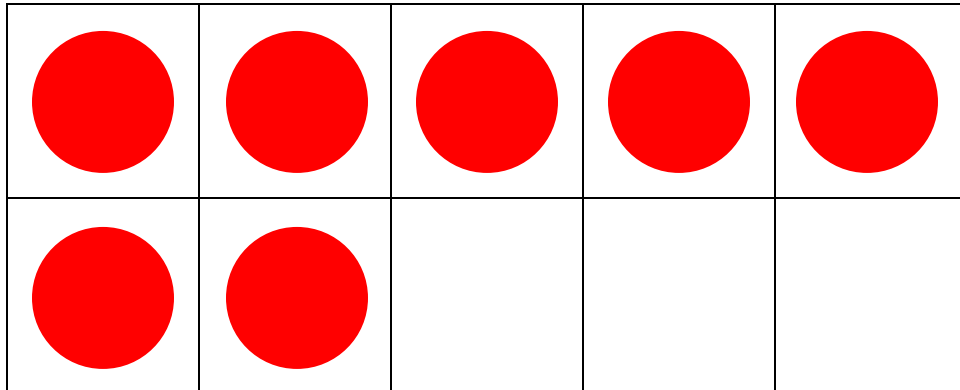


Bar Models

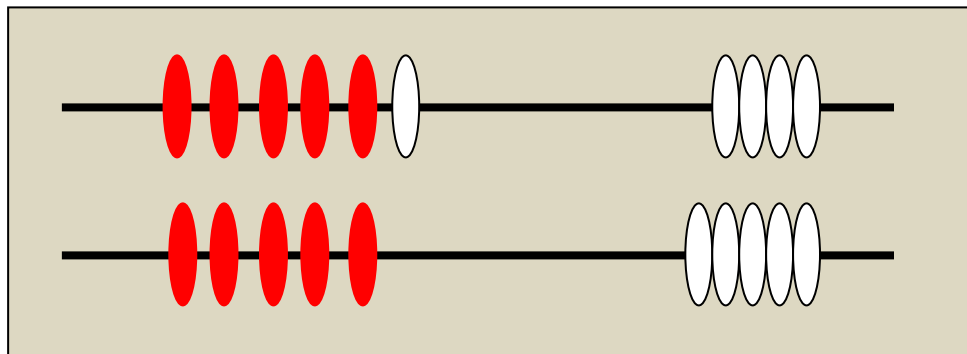


Place Value Models

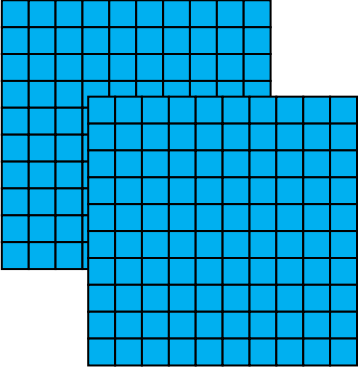
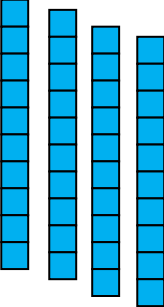
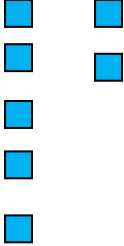
Ten Frame

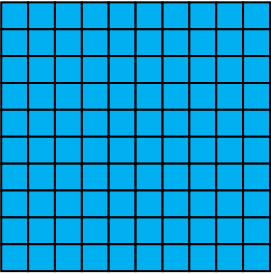
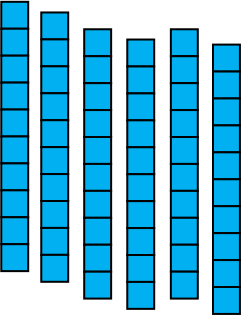
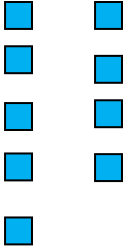


Rekenrek



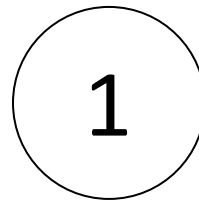
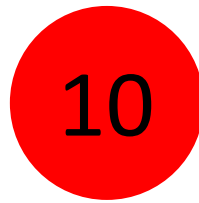
Base-10 Blocks



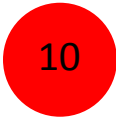
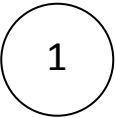


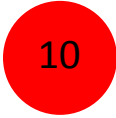
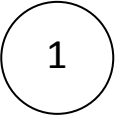
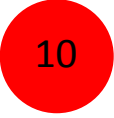
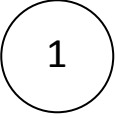
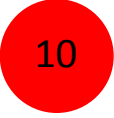
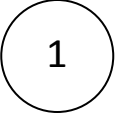

Hundreds	Tens	Ones
		
2	4	7

Ones	Tenths	Hundredths
		
1	6	9




●

Number Disks



Hundreds	Tens	Ones
	 	
	 	
		
		
		
2	7	4

Money

Hundreds	Tens	Ones
		
2	7	4

Area Models

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*	*	*	*	*
*	*	*	*	*
*	*	*	*	*

5

3



Area Model for Distributive Property

	20	3
10	$10 \times 20 = 200$	$10 \times 3 = 30$
2	$2 \times 20 = 40$	$2 \times 3 = 6$

Area Model for Algebra

